GEOGRAPHIC NEWS BULLETINS

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Photograph by W. Robert Moore

FALL FASHIONS FROM "PARIS IN ASIA"

In French Indo-China designs are timeless rather than timely. The conical lampshade bonnet above is an age-old favorite. Spring showers have no terrors for this headpiece, which is really as much of an umbrella as a hat, because it is made of 700 square inches of palm leaf already waterproofed by nature. Its fit can be adjusted by a tug at the anchor-line under the chin (see Bulletin No. 4).

HOW TEACHERS MAY OBTAIN THE BULLETINS

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North Sea Storm Attacks Helgoland, Germany's Island Fortress

ONE of the worst storms in years lashed the North Sea into a froth of destruction at the close of last month. Among victims of its fury was the lightship *Elbe,* stationed just 10 miles southwest of Helgoland. For years the sturdy *Elbe* had safeguarded sailors in the treacherous sea lanes between Germany's North Sea coast and the island speck which is the country's only remnant of outlying empire.

Such storms have pared Helgoland down until inhabitants can point out caves and coves and name the storm that carved them. Now only a fraction of a mile square, the triangular block of red sandstone is literally crumbling away beneath its 2,500 inhabitants.

Yet to this North Sea speck has been accredited as much strategic importance per cubic foot as any comparable chunk of Europe, because of Germany's reported new fortifications there.

Just One-Fifth of Its Former Self

This sea-bitten morsel is the loneliest of the Frisian Islands, which the North Sea has gouged out of the northern coastline of Europe. A broad submerged rocky ledge in the shoal area around Helgoland is a clue to the island's former extent, estimated to have been five times its present size. The wave-worn western side was ringed around with a girdle of granite brought from the Danish island of Bornholm. But, even thus protected, Helgoland is doomed to melt slowly into the sea.

Because of its position in the North Sea, the island bears the reputation of a Gibraltar with only a fraction of Gibraltar's mass. As Germany's "Eye of the Empire," it commands the mouths of the Weser, Jade, Elbe and Eider Rivers, and the harbors of Hamburg, Bremen, and Cuxhaven from a vantage point 28 miles from the nearest mainland.

Shaped somewhat like a lean pork chop, it has dimensions notable for their smallness, except in height. Its sides rise sheer and dripping from the North Sea to a flat top 200 feet above sea level. Its three tips can be visited in an hour's stroll. Upon the triangular rock would fit the new Federal Triangle along Pennsylvania Avenue in Washington, D. C., with a little margin.

Summer Frolics Finance Winter Expenses

Within its diminishing boundaries, the island has three parts: the rock table of Oberland, with its tuft of town; the shoreline shelf projecting like a cap's visor below, with a second edition of town called Unterland; and the wisp of sandy Dune in tow a mile to the east. A thin green felt of pasturage across the island's top completes the color triad which inspired the flag:

"Green the land, red the rock, white the sand:
These colors make the flag of Helgoland."

The money crop of Helgoland is sun tan. This is raised chiefly on the backs and arms of visitors basking on the frail half-moon of barren beach of the Dune, or Sand Island. Among the thousands of summer resorters who steam out from Hamburg was once the American actor, Richard Mansfield, then an infant comfortable in a dresser-drawer cradle. His mother, excited at leaving the island in a terrific storm, embarked without him, so that the forgotten baby was delivered to her on the high seas wrapped in an oilskin coat.

Helgolanders are mainly pilots, fisherfolk, or boarding-house keepers. A rugged race of Frisians, they took to fishing at the beginning of the fifteenth cen-

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MODERN ARGONAUTS, IN THE GOOD SHIP "COMBINE," CRUISE THE WHEAT-WAVES FOR TODAY'S GOLDEN FLEECE

Tractors and other farm machinery have given man horseless horsepower without limit to sail through oceans of grain, stretching from horizon to horizon, like this vast ranch on the Palouse River near Spokane, Washington (see Bulletin No. 2).

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These Little Grains Went to Market

"WILL you walk into my Pit?" said the broker to the bean. And the soy bean stepped into Chicago's famous grain market last month, becoming the first legume, or pod-bearing plant, to join the grains featured for "futures" trading.

The new commodity, a naturalized Chinese immigrant, has had less than ten years' stardom in the pageant of American agriculture. Yet last year it brought home more bacon than did either barley or oats. This year it leaps to the center of the stage beside grains which discovered America soon after Columbus.

Like the grains, each soy bean crop will hereafter find its way into the market channels of a nation by the daily drama of the Pit, staged within the building of Chicago's Board of Trade. In name only are grains present in its paneled oak trading hall. Silo-high and more than barn-broad, the huge room has no farming connections except by telephone. Its harvesting implements are clicking telegraph keys and crayon for blackboards on which fortunes are feverishly chalked up and as feverishly erased. "Futures," the contracts for crops sold now but yet unseen or unplanted, ripen by the light of tall windows rising five stories high and a chandelier 40 feet in diameter.

Bought and Sold by Hand

Visitors in the galleries may watch this noisy many-ring circus. The rings are the Pits, one each for wheat, corn, oats, barley, rye, and other provisions. Wheat, because it travels well and bakes best, performs its price-jumps in the largest pit. The Pits are enclosed craters sunk in the floor, seething with traders. Their major eruptions are noted in history as panics.

The clamor of commerce produces such a din that the trader must resort to sign language to make himself heard. His hand lifted vertically, to signal the quantity of grain in the transaction, gives him, let us say, 25,000 bushels for better or worse. Fingers extended horizontally govern prices. The flick of a thumb in Chicago determines whether the housewife in California or in Maine may soon count out a penny (more or less) at the grocery.

Similar trading in crop futures takes place also on the grain markets of Winnipeg, Liverpool, and Buenos Aires, and in this country in Minneapolis, Kansas City, Duluth, St. Louis, Milwaukee, Portland, and New York City. But Chicago holds the key to the grain bin of the United States. Since 1848, when merchants gathered upstairs over a flour store to fix cereal prices, it has been almost continuously the world's leading grain exchange.

Chicago Near the Wheat Heart of the Nation

Converging lines of steel, which make Chicago the foremost railroad hub in the country, garner the grain from every direction. Within a radius of 500 miles of the Windy City lies much of the Corn Belt's dark rich soil, the most extensive corn-crop country in the world. Farther west, between Chicago and the Rockies, is concentrated much of the fertility which makes the Wheat Belt famous.

From fields to local elevators, as the storage towers are called, is the first move to market. Then grain slides into a box car for a trip to those huge cereal skyscrapers at milling centers, or to ports for export (see illustration, next page). Chicago's waterfront and rail yards are lined with tubular concrete monuments to Ceres, some with million-bushel maws.

The wheat diet, which is the mainstay of this extensive grain commerce, is served in two courses—winter and spring wheat. The latter can be planted only after spring has thawed out its realm north of Chicago's latitude, mainly Minnesota and the eastern halves of North and South Dakota, extending into central Canada. This is one of the two great spring wheat areas of the world, rivaled only by Soviet Russia.

Winter Wheat Protected by Snow

Winter wheat, constituting three-fourths of the country's output, grows in a long extension south of this region, where fields are striped with seed in the fall and the young plant can snuggle under winter's snows without shivering to death. Kansas, Oklahoma, and Nebraska lead in its production.

Kansas is the country's foremost bread-basket filler, followed by North Dakota and Washington. On the rich northwestern Columbia Plateau, parts of Washington (see illustration, page two), Oregon, and Idaho are the finest wheat lands outside the central wheat heart of the United States.

Our corn crop is said to be worth almost twice the whole world's output of gold and silver. The Corn Belt, a rough triangle spreading northwest to Minnesota and southwest to Kansas, produces three-fourths of the native grain which is obviously the nation's choice for acreage and value. It can even be grown in patriotic shades of red, white, and blue.

Bulletin No. 2, November 16, 1936 (over).

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tury, when a strange migration of herring brought them great harvests of fish for 200 years. An equally strange departure of their source of income left them catching only a few lobsters.

Helgoland was traded by England, in 1890, to Germany for Zanzibar, 3,000 times as large. The exchange was ridiculed in Germany as an entire suit of clothes swapped for a trouser button. But the trouser button served a purpose of vital importance when it became one of the world's strongest fortresses during the World War. Not far away, on a misty morning in August, 1914, was fought the first serious naval clash of the war, when British victory littered the North Sea with wreckage.

Note: See also "When the Herring Fleet Comes to Great Yarmouth," *National Geographic Magazine*, August, 1934; "Hamburg Speaks with Steam Sirens," June, 1933; "Renascent Germany," December, 1928; "Europe's Endangered Fish Supplies: The War and the North Sea Fisheries," February, 1915; and "The German Nation," September, 1914.

Bulletin No. 1, November 16, 1936.

© *News Photos, London, Ltd.*

RIDING OUT THE FURY OF A NORTH SEA STORM

Called "drifters" because they follow the wind and currents for fish, these North Sea steamers have to be true to their name in a gale, when drifting is the better part of valor. The globes on the starboard deck are buoys used to keep afloat a two-mile string of gill nets. Such storms made medieval Helgoland inaccessible enough to be an ideal pirates' base. Surrounded by the sea's constant threat, Helgolanders gratefully call their little island simply *det Lunn*, "the Land." Although German is the official language, the natives speak a dialect of Frisian, which resembles ancient Anglo-Saxon.

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Riding the Rails on a Streamliner

RAILROAD records continue to fall in the West. Recently the Burlington's *Zephyr* streaked across four States to establish a new long-distance speed mark, clipping off 1,017 miles between Denver and Chicago in 12 1/5 hours, at an average rate of 83.3 miles per hour. At one point the stainless steel train of eight cars reached a top speed of 116 miles per hour.

Almost overnight streamlined, lightweight, air-conditioned greyhounds of the rails have nosed into smoky railroad terminals in many parts of the country and made their bids for passenger traffic. While perhaps no longer a novelty in large cities, they draw crowds to railroad platforms all along their route, even at places where the trains do not stop, and many of them are already so popular they have waiting lists for sleeper and day coach accommodations.

As Brilliantly Colored as a Circus Train

Some of the eastern delegates to the National Education Association in Portland, Oregon, last summer traveled on the pioneer, long-distance streamlined train, the *City of Portland*.

Here are the impressions of one of them, who made the 2,272-mile journey in 37¾ hours, a trip which requires three nights and two days on the fastest ordinary train:

"From the moment I passed through the gate, ticket in hand, at Chicago, I could not avoid making comparisons. Before me was a long, sleek, shining snake of metal and glass, set close to the tracks, and as brilliantly colored as a circus train. Quite sedate seemed the other limiteds on each side.

"The contrast is the more marked because there is still a festive air about 'streamlining.' Departures are called 'sailings,' because the train makes only six round trips each month, and visitors are allowed 'on board' until the train leaves. Like myself, most of the passengers were taking their first ride on a high-speed train. To most of the visitors it was their first close-up of one. So there was much excited comment and joking.

Wheel Trucks under Circular Vestibules

"The snakelike appearance of the train is heightened by the absence of openings between cars. The train is articulated, that is, the seven cars or units are joined at circular vestibules, with a single set of wheel trucks under each. Rubber is stretched across the outside gap to preserve the unbroken exterior line of the train. Doors, with folding steps, open from the side of the cars. Both the bullet-shaped front and the fin-like end of the train are tapered to lessen wind resistance. In addition to a regular headlight there is a vertical headlight, whose beam warns of the approach of the train on curves or when it is behind embankments.

"Step up the narrow stairway, and you are in a glistening aluminum alloy vestibule, softly illuminated by concealed lights. This anteroom is more suggestive of the inside of an airplane or a submarine than a train.

"Swinging doors lead into the sleeper. On this earliest of long-distance streamliners the berths are narrower than those of a standard Pullman, being wide enough for only one person in each upper and lower. Later streamliners have been built full width.

"The berths have many unusual features. Reading lights in the upper corners have lenses to concentrate the beam. Pull down a small panel and there is a washbasin with hot and cold running water. The bowl has no outlet; to empty it you push the panel back, tilting the bowl, and the water runs down a concealed drain. In using the basin to freshen up when the berth is in use, you sit cross-legged, like a Turk, with the basin pulled down in your lap. The mirror has a light behind it that is most effective for shaving. Berth basins have been eliminated on the newer streamliners.

Quick Pick-ups and Smooth Stops

"In addition to three sleepers, this streamliner has a day coach at the rear with a buffet kitchen, a power car at the front with a 1,200 horsepower Diesel electric motor, a combination mail and baggage car, and a combination diner and lounge car.

"Because the train is virtually a single piece, and the power is applied through dynamo-driven motors, a streamliner starts without a jerk. Its light weight, about a third that of a regular train, permits quick pick-ups and smooth stops. Often it was difficult to believe that we were hurtling along at nearly 100 miles per hour. When we approached a large city and the brakes were applied, it seemed that we were nearly at a stop, until cars on a siding swished by; then we realized that we had slowed down to *only* about 40 miles per hour!

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The State unsurpassed for tall corn is Iowa, where stalks from eight to twenty feet high are a trade-mark. Production here is about double that of any other State except Illinois.

Much Corn Goes to Market "on All Fours"

Corn reaches the market in many disguises. Much of it goes on all fours, for in some States corn has not really ripened until it has borne its fruit of fattened livestock. The Corn Belt produces, as an important by-product, a large percentage of the country's cattle, sheep, horses, poultry, and two-thirds of the commercial pork crop. "Hogging down" is considered a wise way to collect on corn. The grain that stays at home in the silo makes its delayed debut when the little pigs go to market. One pound of pork represents five or six pounds of corn consumed.

Although the hardy oat grows in all forty-eight States, it is especially at home among the corn, three-fourths of the U. S. crop being raised in the North Central States with Iowa and Minnesota in the lead.

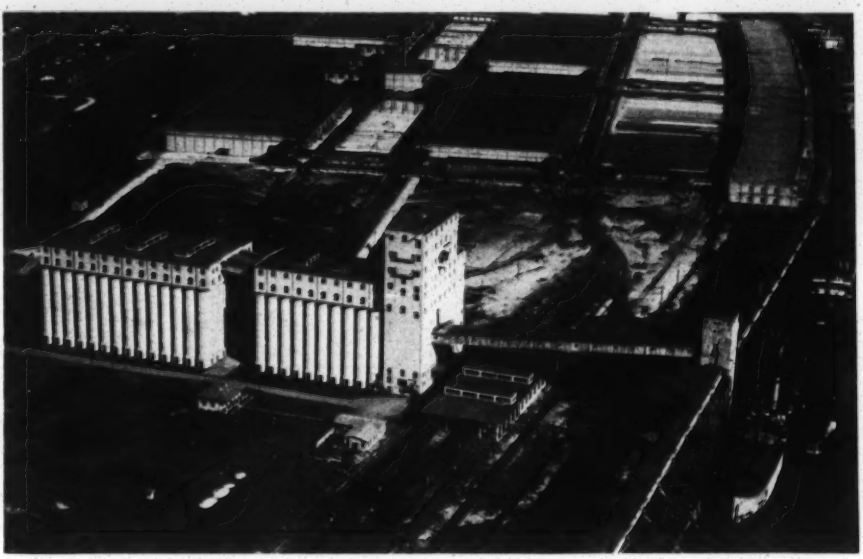
Barley migrates farther north and becomes a hanger-on of wheat also, rotating with that crop and reaching its greatest volume in North Dakota, Minnesota, and Wisconsin. The real poor relation of wheat, however, is rye, which lives in the same neighborhood but accepts poorer soils and more exposure to the weather. The entire United States raises only a little more rye than Czechoslovakia, and about a third as much as Poland.

The soy bean, latest satellite to this grain galaxy, thrives best in Illinois, which produces as much as all the other forty-seven States put together. The rapidly expanding bean belt includes Indiana, Iowa, and Missouri.

The grain market has recently sustained the shock of finding its commodities arriving in a liquid state: a "cereal" alcohol which is mixed with gasoline for motors.

Note: Grain, in the field, as cargo, and stored in elevators, is pictured in the following: "Minnesota, Mother of Lakes and Rivers," *National Geographic Magazine*, March, 1935; "By Car and Steamer Around Our Inland Seas," April, 1934; "A Native Son's Rambles in Oregon," February, 1934; "New York—An Empire Within a Republic," November, 1933; "Washington, The Evergreen State," February, 1933; "Illinois, Crossroads of the Continent," May, 1931; and "Louisiana, Land of Perpetual Romance," April, 1930.

Bulletin No. 2, November 16, 1936.



© *H. J. Harvey*

WAITING ROOMS BETWEEN BOX CARS AND BREAD BASKET

While its fate and price are being decided in the grain markets, wheat takes a rest cure in grain elevators. It is unloaded from box cars, barges, or boats by endless belts and fanned and sifted clean while being dumped into bins for classifying. The biography of each binful is recorded on a blackboard. After brokers have clenched fists and waved hands over its purchase, the grain rattles out through chutes to be carried to some milling center, such as Minneapolis, Kansas City, St. Louis, and Seattle. Or it may start on a long business trip for export, from New York, Newport News, New Orleans, Galveston, or Baltimore. In New Orleans (above), elevators flaunt modernistic architecture in the very face of Old Man River, at the right, where seagoing freighters are tied up at the docks.

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French Indo-China, Land of Jungles and Sidewalk Cafes

A THOUSAND miles through Oriental jungle winds the roadbed of a newly completed railroad line in French Indo-China. It links, at last, after 40 years of planning, the two leading cities of the country, Hanoi and Saigon.

Hanoi, now capital of French Indo-China, thus gets in touch with its southern sister Saigon, which used to be capital until the tide of empire moved the French government north in 1902.

Europeans are definitely in the minority here. In some Indo-Chinese settlements they are so rare that "17 Europeans" is a special notation on the census list of a city of many thousands. The railroad does them the service of linking the two most Europeanized cities.

"Bits of Paris in Asia"

Saigon and Hanoi, especially by the homesick, are called "bits of Paris in Asia." Imposing government buildings rise in gardens laid out by French landscape artists. Streets are straight, wide, and shaded. They bear French names and are traversed by French automobiles, which, along with gasoline, rank high among the country's imports.

But, where there is one automobile, there are a half-dozen rickshaws. Parisiennes, window-shopping for French fashions displayed behind plate-glass windows in importers' shops, rub elbows with little Annamite women in black, Cambodian women in bright sarongs, and Chinese women in loose white coats and black pajama trousers. The street crowds include native soldiery and perspiring, half-naked coolies. The Asiatic "Parisian" may be also Tonkinese, Malay, or Siamese.

City Around A Lake

Hanoi, a river port 80 miles inland from the Gulf of Tonkin, is the capital both of the French protectorate state of Tonkin and of the government of Indo-China's five sections. Besides railroads, French control has brought such modern improvements as electricity and a university to the spot which a century ago was a cluster of a hundred native villages.

Hanoi's heart is a lake, which apparently divides Europe from Asia. On one side lies the French quarter, with sidewalk cafés, theaters, street cars, and a trustworthy water supply. Opposite is the native quarter, where modern touches have been added to, but not substituted for, the noise and congestion so dear to the heart of the Asiatic.

Rice, Rice, Everywhere

Shopping in this Asiatic Paris leads one through a maze of native as well as modern streets. Instead of the Rue de la Paix, the Street of Silk and the Street of Hats offer wearing apparel, and the Street of Rice is the diner-out's substitute for boulevards.

It is modern Hanoi, however, which sponsors the railroad. A junction of several local lines, it is the center for an agricultural countryside with mining sections, producing hard coal, tin, and raw silk.

From Hanoi the southbound railroad must pass through miles of jungle to Saigon's area. Cochin China, of which Saigon is capital, is one of the leading rice regions of the world. Through the jungle's green fence of lofty bamboo, the

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"Oddly enough, there seemed less side-sway on the streamliner at 90 miles an hour than there is on most trains at 60. Soup or water in the diner did not spill, and it was possible to write legibly in the lounge car. At times there was a peculiar little jiggle. Railroad men ascribe this to the track, which was not designed for trains of such speeds, although many thousands of dollars have recently been spent in straightening the line and banking curves to provide the proper margin of safety in speed.

Illinois, Iowa, and Nebraska in One Night

"Everywhere groups of people stood along the track, to wave as the streamliner flashed by. The conductor said that the crowds were even larger when the *City of Portland* was the only long-distance streamliner. 'You would have thought the President was aboard every trip, judging by the receptions and hand-waving,' he said.

"How the pioneers of covered wagon days, plodding their weary and perilous way across the plains and mountains, would rub their eyes if they could see this great yellow and brown caterpillar whizzing over as many miles in five minutes as they were able to cover in a day. Dinner in Illinois, evening conversation in Iowa, a good night's sleep across Nebraska, breakfast and lunch in Wyoming, dinner again in Idaho, and breakfast early next morning as the streamliner curves along the beautiful valley of the Columbia River in Oregon.

"Not all of the streamliner's time-table superiority is due to high speed. The average transcontinental limited makes several long stops, in order that engines may be changed, or water or food taken aboard. The streamliner makes only a dozen scheduled halts, none more than ten minutes!

"At breakfast the second morning a small printed card announced the time we would pass the Bonneville Dam, and, sure enough, at exactly that time we slid by. The train did not even slow down, but we had a fleeting glimpse of the vast project before the brakes began to grind for Portland, and the end of the run."

Note: The contrast between the old and the new in trains is vividly pictured in the following two articles: "Trains of Today—and Tomorrow," *National Geographic Magazine*, November, 1936; and "America's Amazing Railway Traffic," April, 1923.

See also "Northern California at Work," *National Geographic Magazine*, March, 1936; "Penn's Land of Modern Miracles," July, 1935; and "Out in San Francisco," April, 1932.

And, in the GEOGRAPHIC NEWS BULLETINS: "Across the Continent—in Two Years, and in a Day," week of December 3, 1934; also "Railroads Gird to Meet Bus, Airplane and Automobile Competition," week of May 7, 1934.

Bulletin No. 3, November 16, 1936.

Photograph by Acme Newspictures, Inc.

NOT A RACE—JUST A STUDY IN CHANGING RAILROAD TRENDS

An old cone-stacked coal burner of 1885 (left) rolls along a Chicago yard with some of the latest ideas in high-speed locomotion. To its left are, in turn, the oil-burning steam engine of the *Hiawatha*, Milwaukee Road; the Northwestern's *400*; the Burlington's Diesel electric-powered *Zephyr*, and the English-type steam engine of the Alton's *Abraham Lincoln*. The *Zephyr* is similar to the one which recently broke the world's long-distance speed record.

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Hobbies and Hard Work in Finland

INSTEAD of "Made in U.S.A.," a black triangle bearing "Suomi" in gold letters labels some of the most unusual art objects to be seen in the United States now. "Suomi" means "Finland" in Finland, and from Finland comes the exhibit of several thousand articles which was recently opened in Washington, D. C., by the Minister from that northern European country as an educational gesture from the Finnish government.

The exhibit is being displayed in a number of America's leading cities, paying traveling expenses from its store of leather goods, linens, or tufted tapestries bearing strange devices.

American-born children of the 142,000 Finland-born residents of the United States are among the most interested viewers of these pictures and objects, of which they have heard since baby days. They taste the sugared fruit candy so popular with youngsters in Finland. They see dolls in native costume like those their mothers cherished. They see stacks of skis, discuses, and spiked running shoes, typical of those that made their fathers sturdy and made the Flying Finn, Paavo Nurmi, one of the fastest humans.

Buttermilk a National Drink

Piles of baseball bats arouse their curiosity, and they learn that Finland's definitely big-league timber resources are just joining in the great American fun.

Strange to American eyes are the numerous wooden utensils, carved by the industrious rural Finn, who can furnish his house by using an axe, a knife, and a felled tree. For buttermilk, the national drink, he whittles a wooden flask to sling at his side during a day's work in forest or field. Other home-made vessels include a wooden mug with a lid, and a tub-shaped drinking bowl with square projecting staves for handles. Carved from a type of cedar, they are fastened together with binding willow withes, and shine with the natural cleanliness of new wood. Wooden also are round bowls for pumpernickel and oblong trenchers for meat, as well as forks and oval spoons which accompany country-style meals.

Knives, too, are different. Every Finn has his own, a keen blade of surgical stainless steel with handle of bone or wood, carried in a leather sheath buckled to the belt. Centuries ago the "puukko knife" was a necessary weapon against bears; now it combats boredom and figures prominently in the national whittling, as well as an aid to eating.

Wood-carving is a special art, for which Finland's forests and long winter evenings furnish more than inspiration. There are little models of the shaggy hulk of the bear which threatens the lone fisherman, forester, or isolated farmer in this land of vast solitudes; the beast is domesticated into book ends and paper weights. Squarish statuettes show stumpy men with pipes and walrus mustaches, or squat women with hands tucked under their aprons.

Marriage Depends upon Education

Plaques carved from a single piece of wood reveal homely scenes—a woman spinning, a man playing the accordion, a lumberjack hauling logs on a sleigh. One depicts a pair of lovers, but it is no romantic idyl. The girl, carrying a wooden pail of water to her simple log cabin, frowns furiously, for the lad has just confessed to his fiancée that he has failed the examination on the little red primer which he holds so awkwardly. Since an illiterate is not permitted to marry in Finland, their wedding must wait until he can read and write.

These pictures in wood reveal the wild Finnish landscape. They show water always, for the country lists 60,000 lakes. So many Finns live on lake islands, even far from the coast, that they are less inland dwellers than on-land dwellers. Some lakes are said to have as many islets as there are days in the year, and a farm could hardly be small enough not to include an island-studded pool and a dark clump of pines within its view. Half of Finland's area is forested, and the other half wears a lacy network of water.

A plaque of special interest in the United States shows Suomi, against a background of cabin and pine, lifting a money bag (the war debt) from his birch-bark basket and handing it across the ocean to Uncle Sam, who stands on a coast of skyscrapers.

Finnish glass sparkles in all colors: amber, azure, jet black with sterling silver deposit, a subtle smoky gray. One sea green bowl is etched with tiny fish, from which bubbles seem to float up to lightly etched waves above. Around the rims of a set of glasses, round Finnish ladies skate vigorously over the ice. Other distinctive designs make use of the small white flower which blooms among patches of snow, as well as the apples, wheat, and blossom-laden lattices which a welcome summer brings for three short months. Southern Finland's climate is comparable to that of Minnesota, but Lapland in the north is purely Arctic.

Five centuries of using the native clay, which is also exported to other nations, have

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traveler may glimpse yellow fields of ripe rice ready for harvest, or a group of flimsy houses on stilts.

Farther south he may journey almost as many miles through rice fields with only occasional glimpses of bamboo jungles. Here brown natives under lampshade hats (see illustration, page one) till the flooded soil of their rice paddies with crooked sticks for plows; their tractors are ungainly water buffaloes. Modern farming methods are invading French Indo-China slowly, and plantations for cotton, rubber, and coconuts are appearing as variations on the popular rice fields.

Weekly Flight to France

Saigon is a surprisingly modern city, largely because it had to be rebuilt after its inhabitants lost their argument with French invaders in 1861. Its location near the southern tip of French Indo-China encourages commerce with the east—China, Japan; with the south—Singapore, Java; as well as with the west. Weekly planes to Marseilles link it swiftly with France.

Rice keeps Saigon busy; half a hundred rice mills daily prepare over three thousand tons for markets around the world. The large native population requires not a little; only one-tenth of Saigon's people are French.

Note: Additional material about Indo-China, including photographs in black and white and in color, can be found in the following: "Faces and Fashions of Asia's Changeless Tribes," *National Geographic Magazine*, January, 1936; "By Motor Trail across French Indo-China," October, 1935; "Along the Old Mandarin Road of Indo-China," August, 1931; "Four Faces of Siva," August, 1931; and "Glimpses of Asia," May, 1921.

Bulletin No. 4, November 16, 1936.

Photograph by W. Robert Moore

RICE TO THE LEFT OF THEM, RICE TO THE RIGHT OF THEM, GREETS THE TRAIN PASSENGER IN INDO-CHINA

As the new railway gets into the southern provinces, travelers see proof that the country exudes rice by the ton. Annually five million acres are flooded in Cochin China for underwater farming. Irrigation throws a wet blanket over the rice paddies, and the native farmer can trade his overalls for bathing trunks. Water buffaloes are perfect "tractors." They don't stall in mud holes and they shed rain like ducks. A half million of them are used in Cochin China alone.

taught Finland some trade tricks. Wood firing makes thin glass and pottery quite tough. Baking dishes, of square design, in ivory, brown, or green, trimmed with silvery gray, have no fear of even the hottest ovens. Pottery vessels are juglike, with stopper-sized necks.

Finland makes good use of her two leading metals, iron and copper. Wrought iron candlesticks have bases like figures, so that four can be lined up for the date: 1936. Copper kettles have handles sheathed in birch bark to protect the unwary hand.

To the satiny gleam of Finnish hand-loomed linens, vegetable dyes add carroty reds and oranges, asparagus green, lemon yellow, and eggplant brown. Beside them are exhibited small hand looms, the correct width for mufflers. These are similar to the large looms which are considered a part of Finnish household furniture.

Colorful woolen caps, mufflers, and mittens were made by those who were too old for more strenuous ways of earning their coffee money. Footgear includes Finnish shoes of plated velvety birch bark and Lapp slippers of reindeer skin.

Note: For other descriptions and photographs of Finland, its people, and its customs, see "Where the Sailing Ship Survives" (Åland Island), *National Geographic Magazine*, January, 1935; and "Helsingfors—A Contrast in Light and Shade," May, 1925.

See also in the GEOGRAPHIC NEWS BULLETINS: "Åland Islands Plead for Peace," March 30, 1936; and "Finland—Somber Land of Forests and Lakes," January 27, 1936.

Photograph by J. and F. Parikas

THEIR DRESS IS WARM IN COLOR AND WEIGHT

At the exhibit of Finnish arts and handicrafts, one may be fortunate enough to see a costume similar to that on the left. Plaits in a rich blue skirt swing with each step to reveal Roman stripes of red, yellow, green, black and white lines. Skirt and jumper are joined, and belted only by apron strings. The costumes above are typical of the region south of Lapland, along the shore of the Gulf of Bothnia.